

(12) UK Patent Application (19) GB (11) 2 126 275 A

(21) Application No **8317451**  
(22) Date of filing **28 Jun 1983**  
(30) Priority data  
(31) **3232607**  
(32) **2 Sep 1982**  
(33) **Fed. Rep. of Germany (DE)**  
(43) Application published  
**21 Mar 1984**  
(51) INT CL<sup>3</sup>  
**E05C 9/04 9/10**  
(52) Domestic classification  
**E2A 106 120 402 510 AK**  
**U1S 1212 1820 E2A**  
(56) Documents cited  
**GB 0611797**  
**GB 0216438**  
(58) Field of search  
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#### (54) A latch

(57) A latch for holding closed a door or a flap, for example the flap of a glove compartment in a motor car, comprises two spring-loaded bolts which may be moved in opposite directions and which engage behind locking stops opposite one another, in their closed position. The bolts (11, 12) are retracted to open the latch by

way of an unlocking handle (5). The handle has two ribs (8, 9) which are inclined in opposite directions and which cooperate with corresponding elements (15, 16) on the spring-loaded bolts (11, 12) so that when the handle is moved, the bolts are retracted.

In an alternative embodiment the latch bolts may be withdrawn by depressing a sliding handle.

**FIG. 3**

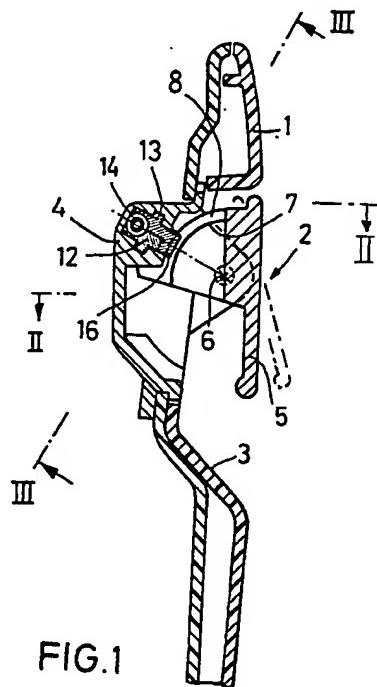
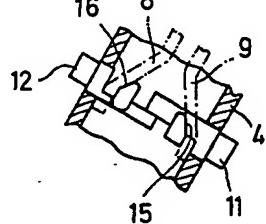
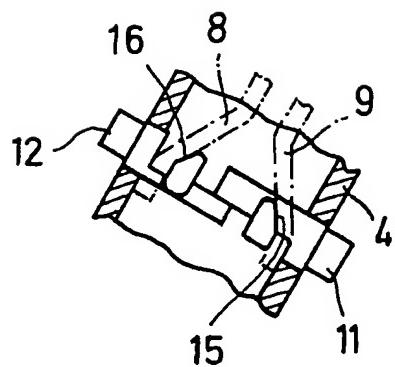


FIG. 1

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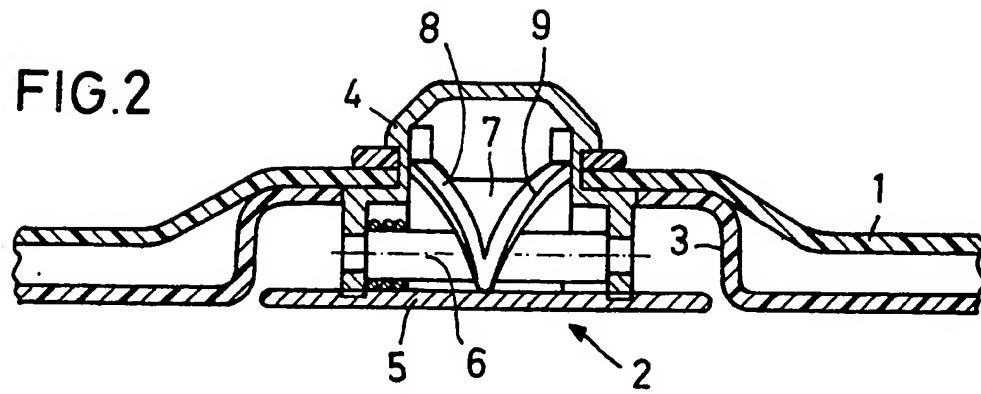
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FIG. 3



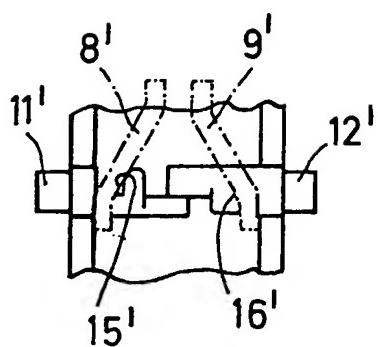
This technical drawing shows a cross-section of a mechanical device. At the top, a cylindrical component labeled 1 is shown with a ribbed outer surface. A vertical tube labeled 2 extends downwards from it. A horizontal tube labeled 3 is attached to the side of the vertical tube. A small circular component labeled 4 is positioned near the junction of the two tubes. A vertical slot labeled 5 is present in the side wall of the vertical tube. The bottom section of the vertical tube features a flared outlet labeled 6. A horizontal tube labeled 7 is connected to the flared end of the vertical tube. A small circular component labeled 8 is located at the top of the vertical tube. A horizontal tube labeled 9 is attached to the side of the vertical tube, just above the flared section. A small circular component labeled 10 is located at the top of the vertical tube. A horizontal tube labeled 11 is attached to the side of the vertical tube, just below the flared section. A small circular component labeled 12 is located at the top of the vertical tube. A horizontal tube labeled 13 is attached to the side of the vertical tube, just below the flared section. A small circular component labeled 14 is located at the top of the vertical tube. A horizontal tube labeled 15 is attached to the side of the vertical tube, just below the flared section. A small circular component labeled 16 is located at the top of the vertical tube. Three directional arrows are present: arrow I points to the left, arrow II points downwards, and arrow III points upwards.

FIG.2



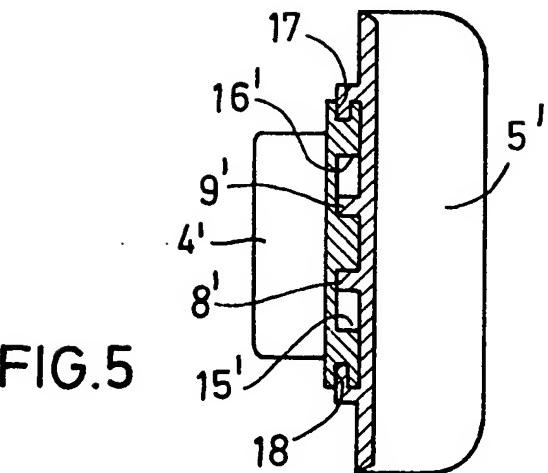
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FIG.6



This technical drawing shows a cross-section of a mechanical device. At the top, a vertical rod or shaft is shown with a slot cut into its side. A small circular component, labeled 14', is positioned within this slot. The shaft extends downwards through a housing or base. On the left side of the shaft, there is a rectangular cutout. On the right side, a curved, ribbed tube or hose, labeled 5', is attached. The base of the assembly features a flared, tapered section. Three arrows labeled 'V' point downwards from the top, and three arrows labeled 'VI' point upwards from the bottom, indicating specific measurement points or directions.

FIG.4



**FIG. 5**

SPECIFICATION  
A catch

- The invention relates to a catch for holding closed a door or flap, for example the flap of a glove compartment in a motor car.
- A catch of this type is known from the German Offenlegungsschrift (Laid-Open Specification) 23 23 776.
- This known catch has the advantage that it comprises two spring-loaded bolts which may be moved in opposite directions, which engage behind locking stops opposite one another in their closed position and which, in the case of a flap pivotable about a lower horizontal axis, ensure reliable locking largely free of fitting tolerances.
- This device does however have the disadvantage that an unlocking handle in the form of two press-buttons which are movable in opposite directions must be actuated in order to release the catch.
- These press-buttons project beyond the surface of the flap in an undesirable manner or must be made accessible in a relatively large recess in the surface of the flap.
- Another catch for flaps, in particular on motor cars, is known from the German Gebrauchsmuster (Utility Model) 69 44 820, in which a gripping plate situated in the plane of the flap surface is provided as an unlocking handle. However this catch has the disadvantage that only one spring-loaded bolt disposed perpendicular to the pivoting axis of the flap is provided, which as a result of large tolerances between the flap opening and the flap itself, can lead to inadequate engagement of the spring-loaded bolt behind its locking stop. The flap may then spring open in an undesired manner, particularly when vibration occurs in the motor car.
- According to the invention, there is provided a catch having two spring-loaded bolts which are biased apart to a closed position and may be moved in generally opposite directions into an open position, and an unlocking handle which may be moved from a rest position where the catch is closed to an unlocking position where the catch is open, the handle being provided with two guide surfaces which converge or diverge in the direction of movement of the handle from the rest position to the unlocking position and the bolts being provided with engagement portions which engage the guide surfaces so that when the handle is moved from the rest position to the unlocking position, the convergence or divergence of the guide surfaces draws the engagement portions together to move the bolts against their spring-loading to the open position.
- The invention will now be described further, by way of example, with reference to the accompanying drawings, in which:
- Figure 1 is a vertical section through a closing device for flaps with a gripping plate;
- Figure 2 is a section along the line II—II in Figure 1;

- Figure 3 is a section along the line III—III in Figure 1;
- Figure 4 is a vertical section through a closing device for flaps with a press-button;
- Figure 5 is a section along the line V—V in Figure 4, and
- Figure 6 is a section along the line VI—VI in Figure 4.
- The catch 2 comprises two main parts, a housing 4 and a handle lever 5. The handle lever 5 is mounted in the housing 4 so as to be pivotable about an axis 6 which lies close to the outer surface of the flap and approximately in the centre of the lever 5. The rear side of the lever 5 is provided with a roller section 7 which extends about the axis 6 and on which are formed two oblique planes inclined in opposite directions in the form of ribs 8 and 9 acting as guide surfaces. Two spring-loaded bolts 11 and 12 are displaceable in opposite directions parallel to the plane of the flap and urged apart by a spring 14, are held in the housing 4 so as to be displaceable in a channel 13. The spring-loaded bolts 11 and 12 are provided with lugs 15 and 16 by means of which they cooperate with the ribs 9 and 8 on the roller section 7 of the handle lever 5. If the handle lever 5 is gripped at its lower end by the fingers and is swung out of the plane of the flap, the two ribs 8 and 9 forming oblique planes inclined in opposite directions produce, in conjunction with the lugs 15 and 16 on the spring-loaded bolts 11 and 12, a simultaneous retraction of the spring-loaded bolts in opposite directions and thus release the catch holding the flap closed.
- An alternative embodiment is illustrated in Figures 4 to 6, in which essentially corresponding parts are given reference numerals which are the same but are primed.
- A catch 2', which comprises a housing 4' and a slide knob 5', is mounted on a flap 1. This slide knob 5' is mounted in the housing 4' so as to be displaceable by way of lateral guides 17 and 18. The rear side of the knob 5' is provided with two ribs 8' and 9' forming oblique planes inclined in opposite directions and acting as guide surfaces. Two spring-loaded bolts 11' and 12', which are displaceable in opposite directions parallel to the plane of the flap, are held in the housing 4' so as to be displaceable in a channel 13', and are urged apart by a spring 14'. The spring loaded bolts 11' and 12' are provided with lugs 15' and 16' by means of which they cooperate with the ribs 9' and 8' on the rear side of the slide knob 5'. If the slide knob 5' is moved downwards in its guides 17 and 18, the two ribs 8 and 9 act on the lugs 15 and 16 on the spring-loaded bolts 11' and 12' to produce a simultaneous retraction of the spring-loaded bolts.
- A lock cylinder, which when locked prevents pivoting movement of the handle lever 5 or displacement movement of the slide knob 5' respectively from their rest positions shown in

solid lines to their actuating positions shown in dash-dot lines, may be inserted in a manner known per se in both the handle lever 5 and the slide knob 5'.

##### 5 Claims

1. A catch having two spring-loaded bolts which are biased apart to a closed position and may be moved in generally opposite directions into an open position, and an unlocking handle which may be moved from a rest position where the catch is closed to an unlocking position where the catch is open, the handle being provided with two guide surfaces which converge or diverge in the direction of movement of the handle from the rest position to the unlocking position and the bolts being provided with engagement portions which engage the guide surfaces so that when the handle is moved from the rest position to the unlocking position, the convergence or divergence of the guide surfaces draws the engagement portions together to move the bolts against their

spring-loading to the open position.

2. A catch as claimed in Claim 1, wherein the guide surfaces converge in the direction of movement of the handle to its unlocking position.
3. A catch as claimed in Claim 1 or Claim 2, wherein the unlocking handle is pivotable in a housing and is movable from its rest to its unlocking position about the pivot axis.
4. A catch as claimed in Claim 3, wherein the guide surfaces are provided on a surface which is a section of a cylinder centred on the pivot axis.
5. A catch as claimed in Claim 1 or Claim 2, wherein the unlocking handle is able to slide between its rest position and its unlocking position.
6. A catch as claimed in any preceding claim, wherein a key-operated lock is provided to lock the unlocking handle in its rest position.
7. A catch substantially as herein described with reference to Figures 1 to 3 or Figures 4 to 6 of the accompanying drawings.

Printed for Her Majesty's Stationery Office by the Courier Press, Leamington Spa, 1984. Published by the Patent Office.  
25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.